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(54) **RETRACTABLE CLOTHESLINE SUPPORT AND METHOD**

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D06F 57/12	(2006.01)
A47G 25/06	(2006.01)

(52) **U.S. Cl.**
CPC ***D06F 53/045*** (2013.01); *A47G 25/0685* (2013.01); ***A47B 43/00*** (2013.01); ***D06F 57/04*** (2013.01); ***D06F 57/12*** (2013.01)

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USPC ..... 211/1.3, 96, 195, 172, 97–102, 119.01, 211/85.3; 224/313, 314, 326, 493, 162; 108/28, 29, 160, 152, 134, 135; 43/18.1 CT, 15, 16; 248/240, 240.4, 248/289.11, 353
See application file for complete search history.

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Twenty-seven (27) pictures showing various clothesline devices used with RV's taken by applicant during a 2010 camping trip.

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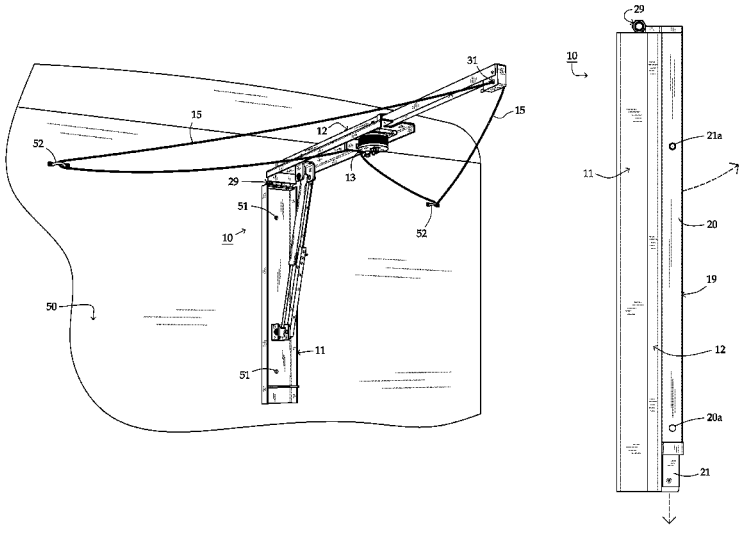
(57) **ABSTRACT**

A retractable clothesline support and method utilizes a pivotable arm hingedly attached to a housing. The arm having a reel with a line such as a clothesline wound thereon can be unlocked and then unreeled. The line support is particularly useful with an RV or other mobile vehicle while traveling for hanging wet clothes or the like for drying purposes. When not in use the clothesline can be wound on the reel, the reel locked and the arm closed for containment within the housing.

18 Claims, 7 Drawing Sheets



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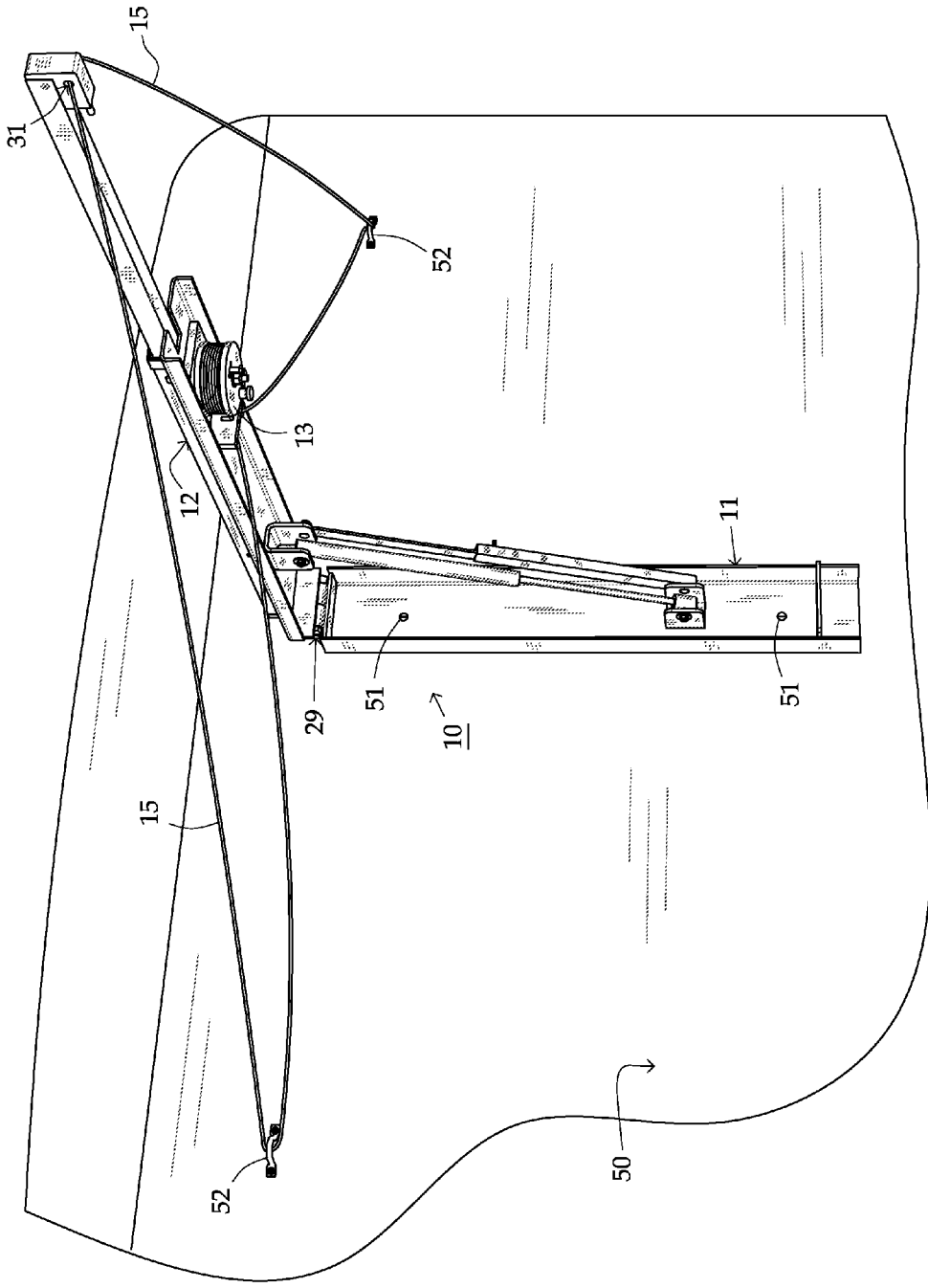


FIG. 1

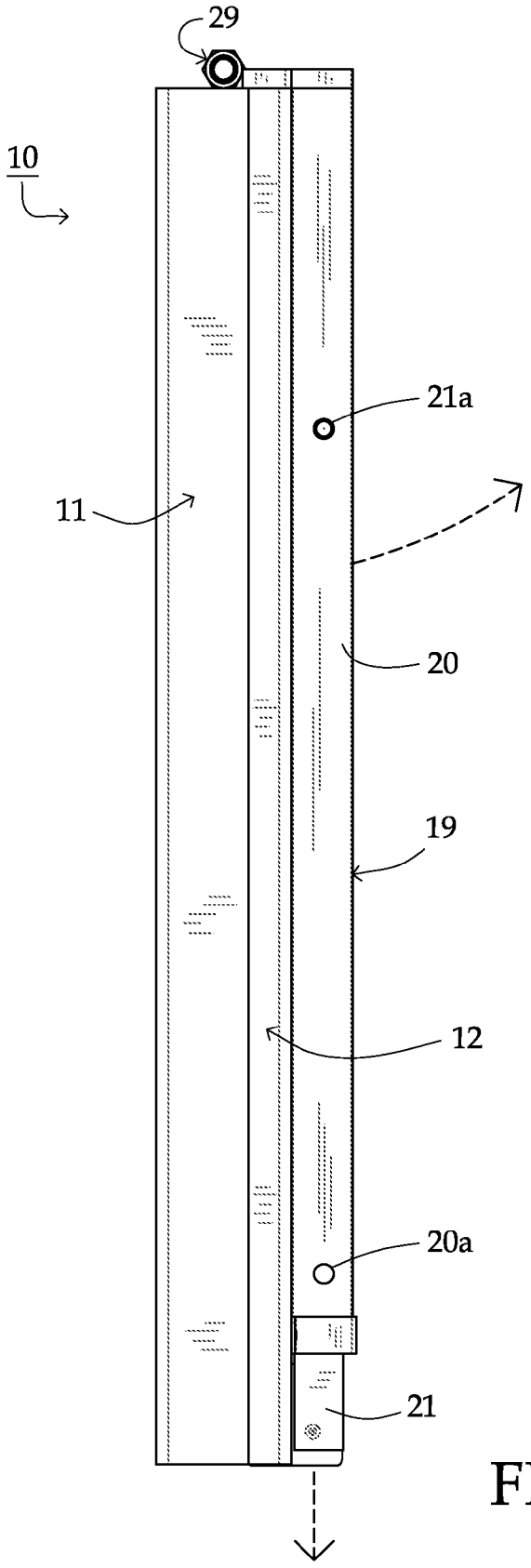


FIG. 2

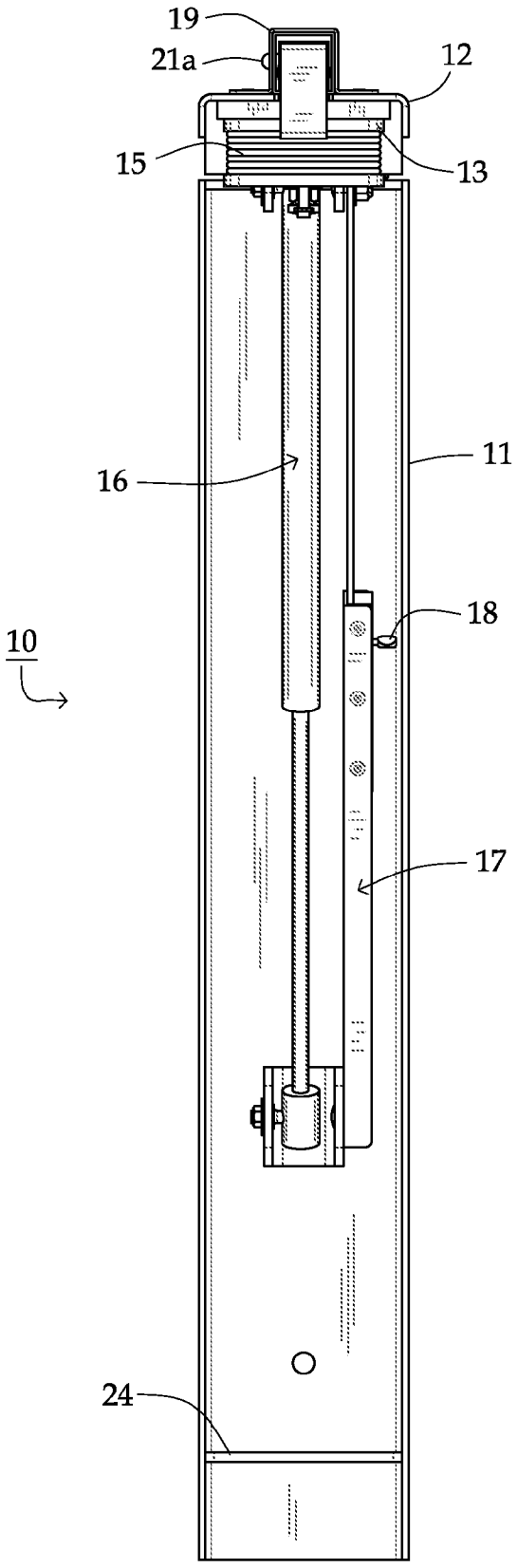
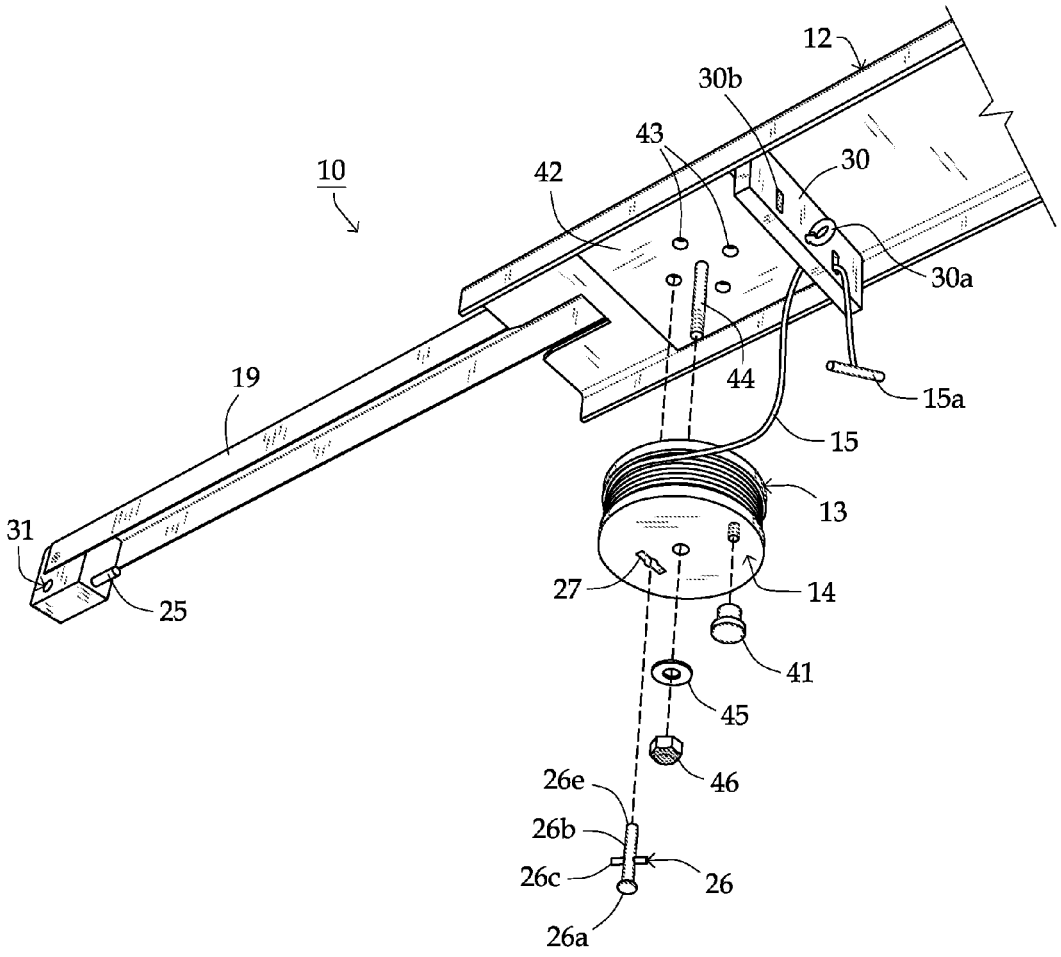


FIG. 3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30b
43
10
42
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30a
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41
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26e
26b
26c
26
26a

FIG. 4

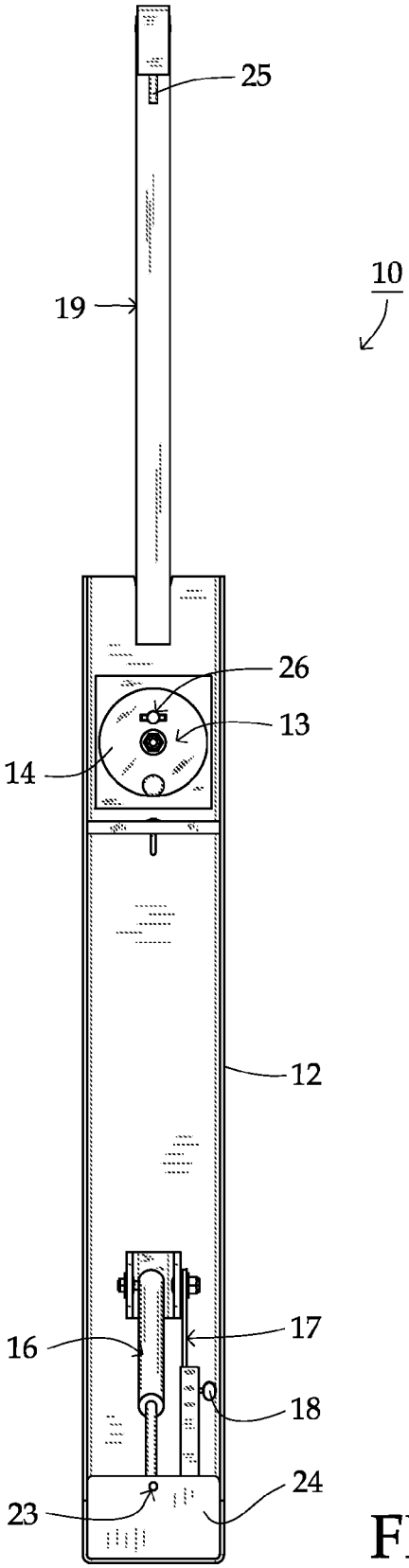

FIG. 5

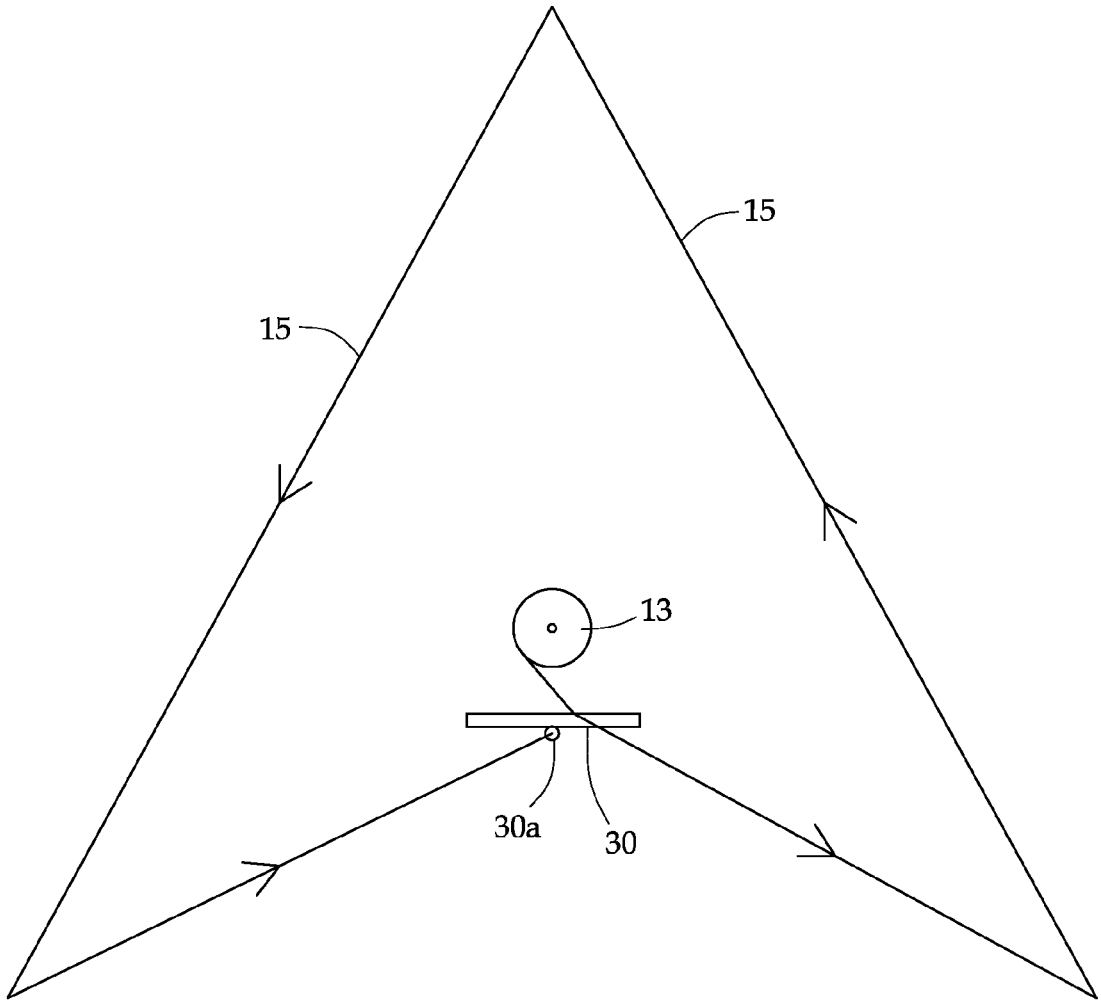

FIG. 6

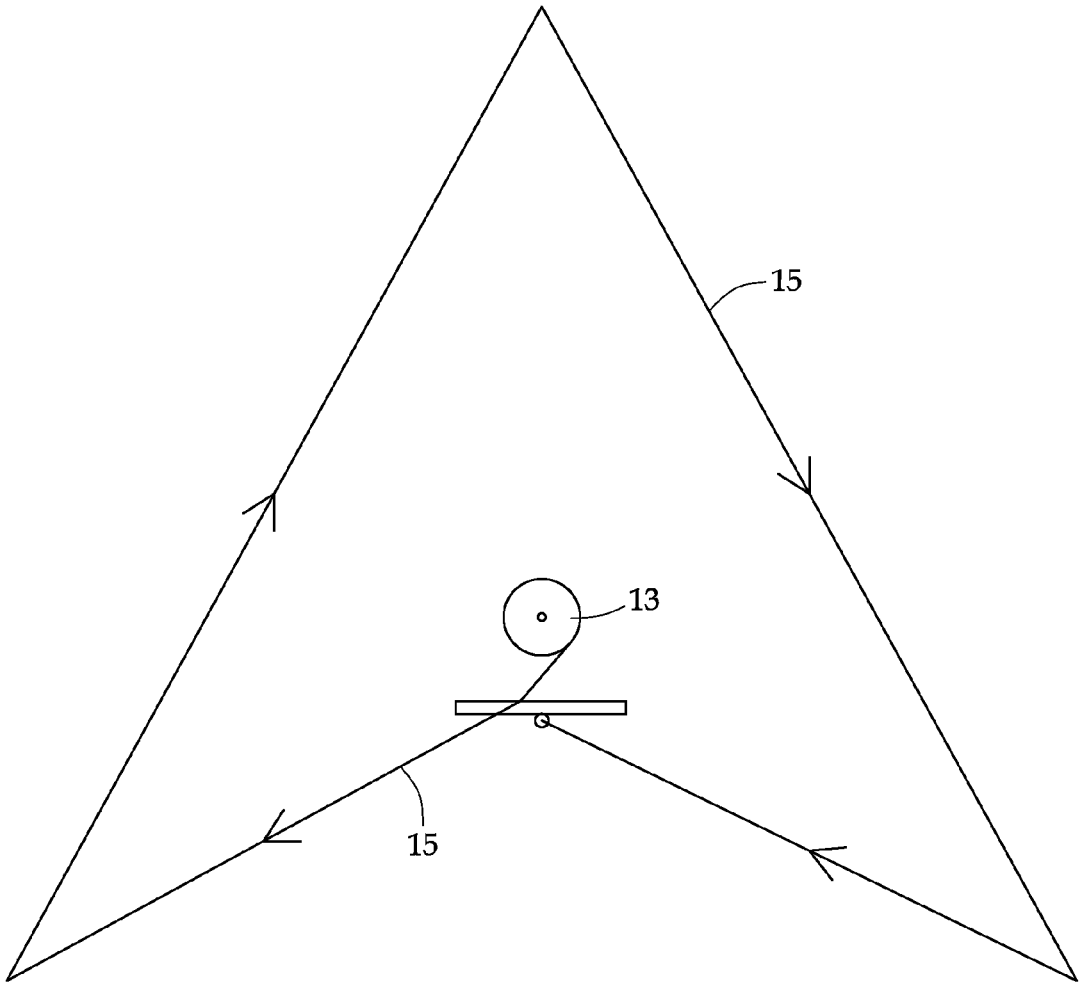

FIG. 6A

RETRACTABLE CLOTHESLINE SUPPORT AND METHOD

FIELD OF THE INVENTION

The invention herein pertains to a line support having a lockable reel and particularly pertains to a retractable clothesline support for attachment to an RV, trailer, camper or other mobile vehicles.

DESCRIPTION OF THE PRIOR ART AND OBJECTIVES OF THE INVENTION

While camping in an RV, trailer, motor home or the like it is often difficult to suspend a line such as for example a clothes line in a convenient manner. Various clothes, hoses/equipment, and the like need drying to prevent mold, mildew and the like. Certain types of old hangers and retractable clothesline supports are shown for example in U.S. Pat. Nos. 4,225,048; 4,470,558; 4,856,661; 5,090,578; 7,273,154; and 7,717,391.

However, such prior art devices do not solve many of the problems encountered during parking in an RV or camper and therefore the present invention was conceived and one of its objectives is to provide a retractable clothesline support which can be easily affixed and permanently installed on the outside of an RV or similar vehicle for use at a campsite or other location.

It is another objective of the present invention to provide a retractable clothesline support and method for use which securely protects the clothesline during travel yet can be quickly opened and the clothesline extended upon arrival at a campground or other location for hanging or drying various items.

It is still another objective of the present invention to provide a clothesline support which allows the user to select any of a number of line lengths and configurations for easy placement and drying of wet clothes, equipment parts or the like.

It is yet another objective of the present invention to provide a retractable clothesline support which has relatively few components and is inexpensive to manufacture and sell.

It is a further objective of the present invention to provide a clothesline support which can be latched into a closed position for compact storage and which contains a line reel which can be locked or unlocked as needed during use.

Various other objectives and advantages of the present invention will become apparent to those skilled in the art as a more detailed description is set forth below.

SUMMARY OF THE INVENTION

The aforesaid and other objectives are realized by providing a retractable clothesline support for use with a clothesline or the like and includes a lockable reel which maintains the line during use. The line support has an arm hingedly attached to a housing whereby the arm can be released and extended substantially in a ninety degree angle from the housing through a hinge. A line reel is affixed to the arm and can be locked into place and released when needed. A telescoping arm extension is affixed atop the arm for extending the usable length of the arm. The arm extension includes a line guide for attachment of the clothesline thereto as needed.

In order to maintain the arm in its open, generally horizontal posture, a pneumatic cylinder urges the arm from the housing whereby a retractable brace can then be adjusted using a tightenable thumb screw to maintain the arm in the open posture. The telescoping arm can be extended as desired and once the arm is suitably extended, the reel can be manually unlocked and the line thereon urged therefrom for attachment to the side of the RV, a tree, a post or other desired structure, or alternatively back through the line guide on the arm extension, forming one of many suitable clothesline configurations. Thereafter the reel is locked to maintain the selected line configuration. In the method of use, the reel can be unlocked and the line can be quickly retracted onto the reel, the arm closed to the housing and latched, protecting the line and the other components from dirt and debris as may be encountered during travel.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** shows a perspective view of the retractable clothesline support mounted on the side of an RV (shown in fragmented fashion) in an open configuration with the clothesline extended and ready for use;

FIG. **2** pictures a left side elevational view of the clothesline support as removed from the RV in a closed configuration, the right side elevational view being a mirror image thereof;

FIG. **3** depicts a front elevational view of the clothesline support of FIG. **2** but shown in a fully open posture;

FIG. **4** demonstrates a perspective, partial view from beneath the opened, extended arm with the reel exploded therefrom;

FIG. **5** illustrates a bottom plan view of the clothesline support with the arm opened and the telescoping arm extension fully extended;

FIG. **6** features a schematic view of a typical triangular line configuration formed by the retractable clothesline; and

FIG. **6**A shows another schematic line configuration from that seen in FIG. **6**.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT AND OPERATION OF THE INVENTION

For a better understanding of the invention and its operation, turning now to the drawings, FIG. **1** illustrates preferred retractable clothesline support **10** attached to the partial side of conventional RV **50** by conventional fasteners such as screws **51**, bolts or the like. Clothesline support **10** could likewise be used while attached to the side of a post, house, camper or other suitable structure as desired. Clothesline support **10** is shown fully opened with a typical line such as a nylon clothesline **15** extended for use and attached to RV **50** such as by marine grade stainless steel padeyes **52** which can be mounted horizontally as shown, vertically or diagonally as desired. Clothesline **15** is preferably a marine grade nylon line which is stronger, more durable and resistant to abrasions, rot/mildew and can be stored either wet or dry. Clothesline **15** comprises a length preferably of thirty feet (**30'**) however could be of any length.

Clothesline support **10** includes main housing **11** and pivotable arm **12** attached thereto by hinge **29** as also seen in FIG. **2**. Rectangular housing **11** comprises a U-shaped cross-section or channel and includes end member **24** (FIGS. **1**, **3** and **5**) which extends from one side to the other of the channel and includes aperture **23** formed therein. Pivotable arm **12** likewise comprises a U-shaped cross-section and includes reel **13** with line **15** and line guide **30** attached to the inside thereof as shown enlarged and exploded in FIG. **4**. Reel **13** is rotatably affixed to arm **12** such as by axle **44** having a threaded end for attachment of conventional washer **45** and nut **46** to maintain reel **13** thereon. Reel **13** further includes reel winder **41** and

reel lock **26**. The opposing end of reel axle **44** is rigidly affixed within plate **42** having a series of apertures **43** therearound for reception of the opposing end **26***e* of reel lock **26** to thus lock reel **13** in place to prevent unwanted movement. Reel lock **26** further includes knobbed end **26***a* joined to main, cylindrical body **26***b*, and cross member **26***c* which is received within recess **27** of reel **13**. As would be understood when reel lock **26** is disengaged reel **13** is free to rotate around axle **44** for winding and unwinding of line **15**, when locking of reel **13** is desired reel lock **26** is manually rotated and engaged whereby end **26***e* seats within one of apertures **43**. Line guide **30**, similar to end member **24**, spans from one side of U-shaped arm **12** to the other and is, formed from polycarbonate plastic and attached to arm **12** such as by screws, adhesives or other suitable attachment means. Line guide **30** includes circular line guide catch **30***a* and a pair of openings **30***b* formed therein.

Clothesline support **10** further includes pneumatic cylinder **16** and adjustable, retractable brace **17** which are both affixed at one end to housing **11** and at the opposing end to pivotable arm **12** (see FIG. **1**). As would be understood when support **10** is collapsed as shown in FIG. **2**, the respective sides of pivotable arm **12** abut respective sides of housing **11** such that reel **13** is maintained between end member **24** and line guide **30** whereby pneumatic cylinder **16** and retractable brace **17** are separated from reel **13** by line guide **30**. Such closure and separation prevents dust, debris and the like from entering clothesline support **10** and maintains reel **13** in a confined space prohibiting unwinding or tangling of clothesline **15** with pneumatic cylinder **16** and retractable brace **17**.

Clothesline **15** is wound on reel **13** as conventional and includes toggle **15***a* at the end thereof which is positionable through for example one of openings **30***b* in line guide **30** (FIG. **4**) and acts as a fastener preventing inadvertent removal. As would be understood, toggle **15***a* can be aligned in parallel with line **15** and manipulated to pass through an opening such as openings **30***b* in line guide **30**, line guide **31**, padeyes **52** or otherwise and then released to return to its relaxed, perpendicular orientation with line **15**. As seen for example in FIG. **1**, line **15** with toggle **15***a* has been extended and passed through one of openings **30***b* in line guide **30** (FIG. **4**), one of padeyes **52** on RV **50**, line guide **31** on arm extension **19** (FIG. **4**), the second or opposing padeye **52** and affixed within line guide catch **30***a* (FIG. **4**) which comprises a conventional eye hook.

When clothesline support **10** is in an open posture as seen in FIGS. **1**, **3**, and **5**, the pressure of pneumatic cylinder **16** biases arm **12** to an open ninety degree (90°) posture by pivoting about hinge **29**. Retractable brace **17** shown also in FIGS. **1**, **3** and **5** allows the user to tighten thumb screw **18** to maintain arm **12** in a fully open (ninety degree) posture thereby maintaining the horizontal position of arm **12** relative to housing **11**. Tightening of thumb screw **18** locks brace **17** in place insuring that the weight of (wet) items positioned on clothesline **15** would not overcome the "opening force" of pneumatic cylinder **16**.

As shown in FIG. **2** closed clothesline support **10** includes telescoping arm extension **19** which is affixed to the outside of pivotable arm **12** as also shown in FIG. **3**. Telescoping arm extension **19** includes first section **20** and second section **21**. As shown, first section **20** is affixed to the outer surface of pivotable arm **12** whereas second section **21** is smaller and slides within first section **20**. Both sections **20** and **21** have a rectangular cross section and are preferably formed from square aluminum tubing. Housing **11**, end member **24** and pivotable arm **12** are also formed from aluminum. As is conventional second section **21** includes depressible spring pin or button **21***a* for reception in one of a pair of opposing apertures **20***a* formed in the side of first section **20** as seen in FIG. **2** for either locking inner, second section **21** in a retracted position as seen in FIG. **2** with button **21***a* (FIG. **3**) extending therethrough or in an extended position such as seen in FIGS. **4** and **5**. Second section **21** of arm extension **19** includes line guide **31** and latch pin **25** affixed proximate the end thereof as shown in FIGS. **4** and **5**. Line guide **31** is preferably formed from a polycarbonate plastic and attached to arm extension **19** such as by screws, adhesives or other suitable attachment means. Polycarbonate plastic is the preferred material for line guides **30** and **31** for its durable, light weight qualities and most importantly for the prevention of fraying of clothesline **15** during extended use, however other suitable materials could also be utilized. Latch pin **25** is received within aperture **23** of end member **24** and assists in maintaining housing **11** in a closed, latched position when clothesline support **10** is collapsed.

In the preferred method of use, a user (not shown) depresses button **21***a* for release of button **21***a* from aperture **20***a* proximate hinge **29** in first section **20** and then urges second section **21** of arm extension **19** outwardly or downwardly as shown by the dashed arrow in FIG. **2**, whereby latch pin **25** is removed from aperture **23** to allow pivotable arm **12** to rotate (counterclockwise) outwardly about hinge **29**. Once latch pin **25** is removed, the pressure within pneumatic cylinder **16** pushes arm **12** fully open (ninety degrees) and retractable brace **17** can then be locked using thumbscrew **18**. As would be understood, heavy wet items hanging on line **15**, could cause pneumatic cylinder **16** to collapse thus closing or partially closing arm **12**. The additional locking of brace **17** prevents this inadvertent closing or collapsing of arm **12**. Thereafter, second section **21** is fully extended whereby button **21***a* would enter aperture **20***a* proximate reel **13** to maintain full extension of second section **21**.

Once arm **12** is rotated to its desired position, knobbed end **26***a* of reel lock **26** is manually grasped and urged outwardly to easily remove cross member **26***c* from recess **27** in reel surface **14** as seen in FIG. **4**. Knobbed end **26***a* is slightly rotated or turned and cross member **26***c* is then allowed to rest against surface **14** of line reel **13**. With reel lock **26** so positioned, line **15** on reel **13** can be manually pulled and unwound to a desired length through line guide **30** (FIG. **4**) and drawn into any of a number of configurations such as triangular as shown in FIGS. **6** and **6**A or attached to a tree, post or other suitable member (not seen). Line **15** could also be attached such as shown in FIG. **1** and previously described whereby toggle **15***a* is engaged with line guide catch **30***a*. Once a sufficient amount of line **15** has been manually withdrawn from reel **13**, reel lock **26** is again turned so cross member **26***c* enters recess **27** and end **26***e* is allowed to enter one of apertures **43** for locking reel **13** in place, preventing further unwinding of line **15**. As would be understood, reel lock **26** is conventionally spring loaded to maintain its normal position within recess **27**. Thereafter, line **15** so extended can be readily used for hanging wet clothes, RV hose parts or the like. Line **15** is preferably a conventional, strong nylon cord but could be a cotton, synthetic line, wire cable or other line as desired.

Once use of line **15** is complete and closure of clothesline support **10** is desired, the user would manually disengage reel lock **26** as previously described to provide slack in line **15** for removal of toggle **15***a* and line **15** from the various attachment points. The user then grasps and rotates reel winder **41** of reel **13** to easily retract line **15** onto reel **13**. As seen in FIG. **4** with line **15** positioned through opening **30***b* in line guide **30**, line **15** is self-guided for winding about reel **13** without worry of

tangling and toggle **15***a* will cease the winding action once it abuts line guide **30**. Thereafter, reel lock **26** is reengaged to lock reel **13** in place and prevent unwinding. Thumbscrew **18** is then loosened and a sufficient manual force used on arm **12** to overcome the pressure of pneumatic cylinder **16**, pivoting arm **12** downwardly (clockwise) to close against housing **11**. Button **21***a* is depressed for removal from aperture **20***a* and second section **21** can be manually pushed into first section **20** so button **21***a* enters opposing aperture **20***a* proximate hinge **29** and latch pin **25** engages aperture **23** in end member **24** to lock arm **12** against housing **11**. Clothesline support **10** is thus closed in compact fashion on the side of RV **50** and is again ready for travel or use as needed. No tools are required for set up and use, and no additional storage space is required making clothesline support **10** a desirable addition to the traveling/camping experience.

The illustrations and examples provided herein are for explanatory purposes and are not intended to limit the scope of the appended claims.

I claim:

1. A collapsible drying device for drying articles comprising: a wall mountable housing adapted to be suspended from a wall, said housing includes a recess;

a pivotable arm pivotably attached to said housing to move said pivotable arm between an operational position wherein the pivotable arm extends generally orthogonal from said housing and a collapsed position wherein said pivotable arm is generally parallel to said housing for compact storage of the drying device;

a reel rotatably mounted on said pivotable arm;

a tether line, wherein said tether line wraps around said reel;

a telescopic arm extension attached to the pivotable arm, said telescopic arm has an aperture that is capable of receiving the tether line therethrough;

wherein, when said pivotable arm is in said operational position, said reel is free to rotate to unwind and extend said tether line to pass through the aperture of the telescopic arm and articles are capable of being stored on the tether line to dry said articles;

wherein, when said pivotable arm is moving from said operational position to said collapsed position, said tether line retracts around said reel and said pivot arm is pivoted into the collapsed position wherein said tether line and said reel are stored in said recess of said housing.

2. The collapsible drying device of claim **1** wherein a line guide is attached to said pivotable arm.

3. The collapsible drying device of claim **1** further comprising a reel lock, said reel lock attached to said reel.

4. The collapsible drying device of claim **1** further comprising a pneumatic cylinder, said pneumatic cylinder attached to said arm and to said housing.

5. The collapsible drying device of claim **1** further comprising a retractable brace, said retractable brace affixed to said arm and to said housing.

6. The collapsible drying device of claim **1** wherein said telescoping arm extension includes a latch pin.

7. The collapsible drying device of claim **6** wherein said housing defines an aperture, wherein said aperture of the housing is for receiving said latch pin.

8. The collapsible drying device of claim **1** wherein said telescoping arm extension comprises a first section and a second section, wherein said second section is slideably mounted in said first section.

9. The collapsible drying device of claim **1** further comprising a hinge, wherein said pivotable arm is attached to said said housing via said hinge.

10. The collapsible drying device of claim **8** wherein said first section defines a pair of openings, said second section comprises a spring pin, wherein said spring pin is selectively placed in one of said pair of openings in order to lock the second section in place.

11. The collapsible drying device of claim **5** wherein said retractable brace comprises a thumb screw, wherein said thumb screw is capable of limiting the adjustment of said retractable brace in order to lock the retractable brace in place.

12. A method of utilizing a collapsible drying device comprising the steps of:

a) providing a wall mountable housing adapted to be suspended from a wall, said housing includes a recess;

providing a pivotable arm pivotably attached to said housing to move said, pivotable arm between an operational position wherein the pivotable arm extends generally orthogonal from said housing and a collapsed position wherein said pivotable arm is generally parallel to said housing for compact storage of the drying device;

providing a reel, said reel being rotatably mounted on said pivotable arm;

providing a tether line, wherein said tether line wraps around said reel;

providing a telescopic arm extension, said telescopic arm extension being attached to the pivotable arm, said telescopic arm has an aperture that is capable of receiving the tether line therethrough;

wherein, when said pivotable arm is in said operational position, said reel is free to rotate to unwind and extend said tether line to pass through the aperture of the telescopic arm and articles are capable of being stored on the tether line to dry said articles;

wherein, when said pivotable arm is moving from said operational position to said collapsed position, said tether line retracts around said reel and said pivot arm is pivoted into the collapsed position wherein said tether line and said reel are stored in said recess of said housing

b) pivoting the pivotable arm away from the housing to expose the reel;

c) unwinding the tether line from the reel; and

d) affixing the unwound tether line to a support structure.

13. The method of claim **12** comprising the step of selectively locking the reel.

14. The method of claim **12** wherein pivoting the pivotable arm comprises the step of pivoting the arm generally ninety degrees from the housing.

15. The method of claim **12** wherein unwinding the tether line comprises the step of manually pulling the tether line from the reel.

16. The method of claim **12** wherein affixing the unwound tether line comprises the step of locking the reel with the tether line extended.

17. The method of claim **12** further comprising the step of retracting the tether line on the reel.

18. The method of claim **17** further comprising the step of pivoting the pivotable arm into contact against the housing.

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